Monitoring Financial Flows for Health Research

2001

Monitoring Financial Flows for Health Research

Published by the Global Forum for Health Research, October 2001
ISBN 2-940286-05-1

Additional copies of Monitoring Financial Flows for Health Research are available (at no charge) from

Global Forum for Health Research
c/o World Health Organization
20 avenue Appia
1211 Geneva 27
T + 41 22/791 4260 F + 41 22/791 4394
E-mail: info@globalforumhealth.org

The full text is also available on the website:
www.globalforumhealth.org

The Global Forum for Health Research is supported by the Rockefeller Foundation, the World Bank, the World Health Organization and the governments of Canada, the Netherlands, Norway, Sweden and Switzerland. In addition, individual networks supported by the Global Forum receive funding from the Bill and Melinda Gates Foundation, the Institute of Medecine of the US Academy of Sciences, the UK Department of International Development and others.

Foreword by

by Adetokunbo O. Lucas, MD
Chair, Foundation Council, Global Forum for Health Research

In its widely quoted report, the Commission on Health Research for Development drew attention to the importance of health research as the essential link to equity in development[1]. It proposed that developing countries should review and strengthen the management of health research so as to meet their national needs as well as contribute to the global fund of knowledge. The Commission also recommended that governments in developing countries should allocate at least 2% of the national health budget for research and that 5% of the budget for large externally funded programmes should be assigned to research and capacity strengthening. The Commission hoped that these financial arrangements would provide a secure foundation for funding the priority research needs in developing countries, based on the new concept of Essential National Health Research[2]. The expectation was that developing countries would review their current spending on health research and would strive to meet the stated goals.

Rather disappointingly, neither the developing world nor the donor community enthusiastically followed up the Commission's recommendations, although there were a few exceptions. Furthermore, since most developing countries were not actively tracking the pattern of spending on health research, it was difficult to know how close they were to the target and what trends were occurring over time. One major obstacle was the lack of tested methodologies for monitoring spending on health research at the country level. This report attempts to fill this gap. The Global Forum for Health Research has tackled the problem through its support of a network of investigators. This document contains a preliminary report of their findings. The aim of the publication is to stimulate interest in this important issue in the hope that other investigators will critically review the methodology that this team has developed and perhaps offer refinements. Furthermore, the tentative results from a few countries should stimulate others to follow the example and provide data from many more countries. Ideally, other studies will adopt the core definitions so as to facilitate comparisons among countries and also to examine trends over time.

The results of this initial study were broadly predictable in that there is still a wide gap between the recommendations of the Commission and the pattern of spending on health research in many developing countries. The more advanced developing countries are making more generous allocations but more needs to be done especially in the least developed countries. Inadequate allocation of national resources for health research makes scientists so heavily dependent on foreign grants that they tend to ignore national priorities in favour of lucrative contracts from foreign sponsors. The monitoring of resource flows will provide scientists and other stakeholders with a powerful tool for advocacy in persuading national governments and foreign donors to support priority health research.

[1] Commission on Health Research for Development (1990) *Health Research: Essential Link to Equity in Development. New York, Oxford University Press*

[2] Task Force on Health Research for Development, 1991. *Essential National Health Research. A Strategy for Action in Health and Human Development*, c/o United Nations Development Programme, Geneva, Switzerland

Acknowledgements

The work of the Resource Flows Project (Phase 1) presented in this report was undertaken over a period of three years by a group of partners meeting under the auspices of the Global Forum for Health Research.

Andrés de Francisco, Caryn Miller and Alison Young constituted the Drafting Committee. Consultants commissioned by the Global Forum to provide technical analysis and gather relevant data included Bienvenido Alano, Steven Lipworth, Caryn Miller, David Seemungal and Alison Young. Catherine Michaud served as the lead consultant of the project for two years. An Advisory Group of individuals from a spectrum of countries, backgrounds and types of institutions provided valuable insight and advice as the project evolved (see composition in Annex 1). Susan Jupp oversaw the publication and Karen Janjua assisted with the editing. Kirsten Bendixen and Diane Keithly provided administrative support.

In addition, we would like to thank Dr Adetokunbo O. Lucas, Chair of the Global Forum, as well as the many people who provided data, reviewed earlier drafts or contributed to the discussions. These include the following (excluding members from the Advisory Group):

Academy of Medical Sciences, Russia: Nikolai Napalkov; Aga Khan University Hospital, Pakistan: Zulfiqar Bhutta; Asian-Pacific Resource & Research Centre for Women (ARROW): Rashidah Abdullah; Boston University: Jonathan Simon; Center for Research and Advanced Studies, Mexico: Adolfo Martinez-Palomo; CIDEIM: Juan Francisco Miranda, Nancy Saravia; COHRED: Sylvia de Haan, Peter Makara; COLCIENCIAS: Gloria Inez Palma; EC: Lieve Fransen, Anna Karaoglou; Global Forum for Health Research: Sunil Chacko, Thomas C. Nchinda, Roy Widdus; GEOPS: Delia Sanchez; ICDDR,B: Ishtiaq Zaman; IDRC: Katia Mohindra, Christina Zarowsky; INCLEN: Alan Fogel, Mary Ann Lansang, Marcel Tanner; Indian Council of Medical Research: N.K. Ganguly; INRUD: David Lee; International Federation of Pharmaceutical Manufacturers Associations: Harvey Bale; International Planned Parenthood Federation: Pramilla Senanayake; International Women's Health Coalition: Adrienne Germain; IUATLD: Penny Enarson; MRC South Africa: Marian Jacobs; PAHO: Alberto Pellegrini; Research Council, Norway: Ragna Valen; RICYT: Ernesto Polcuch; Rockefeller Foundation: Charlanne Burke, Tim Evans; Sida/SAREC: Barbro Carlsson, Berit Olsson; Swiss Agency for Development and Cooperation: Martine Berger; Tanzania National Institute for Medical Research: Andrew Y. Kitua; The Bill and Melinda Gates Foundation: Shea Fialdini, Gordon Perkins; Universidade Federal de Pelotas, Brazil: Cesar G. Victora; University of Stanford: Robert Cook-Deegan; USNIH/FIC: Allen Holt, Sharon Hrynkow, Emily Smith; USAID: Irene Koek, Joyce Holfeld, Deborah Lans; Wellcome Trust: C. Davies, V. Gulati; WHO Advisory Committee on Health Research: Mahmoud Fathalla; WHO/CAH: Olivier Fontaine, Cathy Wolfheim; WHO/EDM: Guitelle Baghdadi; WHO/HRP: Enrique Ezcurra, Mike Mbizvo; WHO/TDR: Alvaro Moncayo, Carlos Morel, Paul Nunn, Steve Wayling, Fabio Zicker; World Bank: Demissie Habte, Bernard Liese, Maureen Law, Judy McGuire, Janet Nassim; Consultant: Kate Fraser Miller.

The views expressed in this document are the sole responsibility of the Global Forum for Health Research Secretariat.

Andrés de Francisco
Convenor of Advisory Group
Senior Public Health Specialist
Global Forum for Health Research

Louis J. Currat
Chair of Advisory Group
Executive Secretary
Global Forum for Health Research

Contents

List of inserts

Abbreviations and acronyms

ARI	Acute respiratory infection
ASEAN	Association of South-East Asian Nations
CER	Current exchange rate
CIDEIM	Centro Internacional de Entrenamiento e Investigaciones Medicas
COHRED	Council on Health Research for Development
DANIDA	Danish International Development Agency
DEC	Department of Economics and Chief Economist
DFID	Department of International Development, UK
DGF	Development grant facility
EC	European Commission
ENHR	Essential National Health Research
ESW	Economic and Sector Work
FIC	Fogarty International Center
GBAORD	Government Budget Appropriations and Outlays on R&D
GDP	Gross domestic product
GERD	Gross domestic expenditure on R&D
GNP	Gross national product
GUF	General University Funds
HIV or HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
HRP	UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction
ICDDR,B	Centre for Health and Population Research, Bangladesh
IDRC	International Development Research Centre
INCLEN	International Clinical Epidemiology Network
INCO-DC	International Cooperation Research for Developing Countries
INRUD	International Network for the Rational Use of Drugs
IUATLD	International Union against Tuberculosis and Lung Disease
NABS	Nomenclature for the Analysis of Science budgets
NC	National currency
NGO	Non-governmental organization
NHA	National health accounts
NIDI	Netherlands Interdisciplinary Demographic Institute
NIH	National Institutes of Health, USA
NMS	New Management System
NSF	National Science Foundation
ODA	Official development assistance
OECD	Organisation for Economic Co-operation and Development
PNP	Private non-profit

PPP	Purchasing power parity
R&D	Research and development
RCS	Research capacity strengthening
RF	Resource flows
RICYT	Red Iberoamericana de Indicadores de Ciencia y Tecnologia (IberoAmerican Network of Science and Technology Indicators)
S&T	Science and technology; Scientific and technological
SAREC	Swedish Agency for Research Cooperation with Developing Countries
SDC	Swiss Agency for Development and Cooperation
SEATO	South-East Asia Treaty Organization
SEO	Socio-economic objective
Sida	Swedish Development Authority
SRC	Swiss Red Cross
TB	Tuberculosis
TDR	UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases
TEHIP	Tanzania Essential Health Interventions Project
UNAIDS	Joint Programme on HIV/AIDS
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
USAID	United States Agency for International Development
USNIH	United States National Institutes of Health
WHO	World Health Organization
WHO/CAH	WHO Department of Child and Adolescent Health
WHO/EDM	WHO Department of Essential Drugs and Medicines Policy
WHO/RPC	WHO Department of Research Policy and Cooperation

Executive Summary

1. Introduction

Health research is essential to the design and implementation of health interventions, health policies and health service delivery. Financing health research and development (R&D) is critical to its success.

The information on health research financing is fragmented. This study aims to provide decision-makers with an overview of currently available information on resource flows into health research. In this rapidly changing environment of funding flows into health research, it is critical to have access to information and to analyse it on an ongoing basis.

The main feature of the study is less to provide an overall figure (broadly estimated at close to US$73.5 billion for 1998 from the public and private sectors combined) than to describe the process for arriving at these estimates as a basis for further improvements, and to indicate what to expect from the various data sources and research approaches. In addition, this study presents information on health research funding by developing countries not available before.

2. Overview of the context

For the past decade, and since the ground-breaking work of the Commission on Health Research and Development in 1990, the disequilibrium in health research has been captured in the expression "the 10/90 gap" to indicate the huge discrepancy between the magnitude of disease burden in the world and the allocation of research funding. The exact figures are not known. This will require a lot more work on both burden of disease and resource flows at both the global and national levels. Furthermore, the situation is evolving. For example, with the demographic and epidemiological transitions experienced in developing countries, these countries are bound to benefit more from the research findings undertaken in more advanced countries. However, transmission of findings from the more advanced countries to the developing world is not straightforward in view of the following factors: (a) communicable diseases not prevalent in the more advanced countries still represent a large share of disease burden in developing countries; (b) the determinants of ill-health can vary greatly between regions; (c) the level of development and performance of health systems vary greatly between countries; (d) access to effective treatment, medicines and other research results particularly for the poorer segments of the population are very different between and within countries; (e) interventions for non-communicable diseases available in advanced countries may not be directly adaptable to developing countries or appropriate due to cost and infrastructure requirements, and may not be the most cost-effective intervention in the context of developing countries, particularly for the poorer segments of the population.

In view of this, the gap remains enormous and the need to correct it is just as urgent. In order to ensure that the large reservoir of knowledge available in more advanced countries can be transformed into actual gains of healthy life years in developing countries, it is necessary to increase research particularly in the following areas (as proposed, amongst others, by the 1996 report of the Ad Hoc Committee on Health Research and *The 10/90 Report on Health*

Research 2000 published by the Global Forum for Health Research):

- Analysis of the burden of disease at the country and global levels.
- Analysis of the determinants of health, taking into account not only the biomedical sector but (i) behavioural factors affecting health at the individual and community levels, (ii) factors in sectors other than health having a large impact on people's health, and (iii) factors at the macro-economic policy level.
- Analysis of the current knowledge and of the cost-effectiveness of present interventions to compare viable options at the country and global levels.
- Analysis of the potential cost-effectiveness of future interventions at the country and global levels.
- Analysis of resource flows into health research at the country and global levels.

This is the context in which the present study is situated. Its aim is to contribute to the last of the steps mentioned above.

3. Overview of the present study

This study is the result of teamwork. Members of an Advisory Group, acting in their individual capacity, debated and informed the process for three years. The study presents a new classification system for R&D information, which results from evaluating past achievements. It proposes a future strategy to continue to track health research financing with the involvement of a larger number of partners.

Total worldwide investments into health research was calculated at close to US$73.5 billion for 1998 by both the public and the private sectors (Insert ES.1) as compared to an estimated US$56 billion in 1992 (in current terms). It is estimated that up to one third of this increase is in real terms. In the course of this study, it became evident that important changes were taking place in the health donor community with implications for health research in, and relevant to, developing countries. Public funding (47% of the total funding into health research) grew in the advanced countries as a group and in virtually all the individual countries. Insert ES.2 gives an overview of the public investments into health research for the countries investing the most into health research and the evolution of their investments between 1986 and 1998.

Investments by the private pharmaceutical industry accounted for about 42% of total investments into health research worldwide. Information on the cost of research and clinical trials for discovery and development of medicines was not attempted in this study. The widely quoted figure of US$500 million required to develop a new drug was not evaluated in this study.

The present study reports information on data from developing countries and countries in transition not available earlier. The study did not attempt to do a comprehensive review of all developing countries investing into health research. It focused on a few selected countries

Insert ES.1

Estimated global health R&D funding 1998 (in current US$)

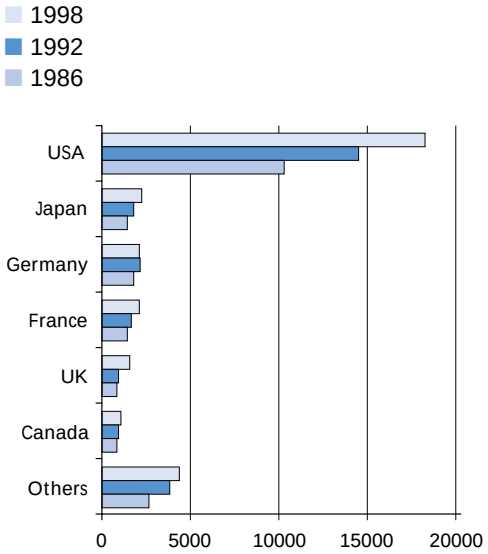
Total US$73.5 billion

	Total (billion US$)	%
Public funding: advanced and transition countries	34.5	47
Private funding: pharmaceutical industry	30.5	42
Private not-for-profit funding	6.0	8
Public funding: developing countries	2.5	3
Total	**73.5**	**100**

Insert ES.2

Trends in public health R&D funding 1986 to 1998 in advanced countries

Million US$ at 1995 prices and purchasing power parities [1]



[1] *See details in Chapter 3.*

Source: Eurostat (annual), OECD (annual) and national publications.

in which teams conducted special surveys on health R&D information or on countries for which published information existed. The Commission on Health Research for Development in its 1990 report recommended that at least 2% of total national health expenditures in less developed countries be allocated to health research and capacity building. This recommendation may be based on the fact that most advanced countries spend the equivalent of 1% to 2% of their national health expenditures on health research. While none of the developing countries studied matched the 2% figure recommended by the Commission, Brazil and Cuba were close to that level of investment in 1998. For lack of data available to the study investigators, the People's Republic of China was not included in this study but will be included in the second phase. Most other developing countries and countries in transition studied invested less than 1% of their national health expenditures into health research. Economic hardship generally results in lower national investments into health research.

Private foundations and other not-for-profit organizations accounted for an estimated 8% of the total health research funding. The numbers and funding of private sponsors of research increased in the late 1990s.

This study proposes a classification method pilot-tested during the course of this study which can be used to incorporate information from developing countries, countries in transition and advanced countries. The system attempts to capture also investments into research capacity building and health systems, two areas frequently left outside of the calculations. The study illustrates the practical use of the classification system by collecting information from national and international sources. The classification of resource flows into health research is presented in insert ES.3.

Information derived from this framework can be used by policy-makers at the national, regional and global levels. This information can be used to relate health research priorities with funding from both the national or international sources.

While funding has increased somewhat in the 1990s as reported, the problem of allocation remains practically the same as in 1990. Research is still seen as a luxury in developing countries and the results of research not very relevant to define policies. Investments in health research need to focus on determinants and diseases corresponding to the heaviest burden and to take a long-term perspective. It is also important to invest in research capacity building in the South and to ensure the survival of research institutions that have been struggling to survive over the years. Moreover, the large majority of health research funding is invested into

biomedical research with little investment into health economics and social sciences. Finally, it is necessary to ensure that the outputs of research are implemented in health and development programmes and transformed into measurable health improvements for the people.

Gathering, interpreting and using information of resource flows into health research is one of the crucial steps to identify and understand health research priorities at the national, regional and global levels. Only by measuring efforts, both human and financial, invested into research of the most neglected health problems in the world, will we know how much priority these are given. This study is a step in that direction and a basis for a next round of studies in this critical area. We hope that this study will inspire others to contribute to this effort.

Insert ES.3

Classification of resource flows for health research

Levels of aggregation of R&D funds

A1. Non-oriented, fundamental research
A2. Health conditions, diseases or injuries (classified by disease)
A3. Exposures, risk factors that impact on health (determinants)
A4. Health systems research
A5. Research capacity building

Further details on the classification and subcategories can be found in Annex 2.